

a lower part comprising a lower end comprising a flapper valve;
wherein the lower part of the dipleg has a diameter which increases along the lower part to the lower end of the dipleg.

2. (Once Amended) The apparatus of claim 1, in which the diameter of the lower part increases continuously such that an angle formed by the inner surface of the lower part of the dipleg and the vertical axis is between about 0.2° and about 4° .
3. (Once Amended) The apparatus of claim 2, in which the angle is between about 0.5° and about 2° .
4. (Once Amended) A process for retrofitting an existing cyclone separator apparatus for separating solids from a gas-solid containing feed resulting in a gas-rich stream, said separator comprising a dipleg comprising:

an upper part; and,

a lower part comprising a lower end comprising a flapper valve;
wherein the lower part of the dipleg has a diameter which remains constant along the lower part to the lower end of the dipleg;

said process comprising:

modifying the dipleg such that the diameter of the dipleg increases along the lower part to the lower end.

5. (Once Amended) A process for separating gas from solids comprising:
feeding a gas-solid containing stream into a cyclone separator apparatus, said apparatus comprising:

an upright hollow circular housing comprising:

an inner surface;

an outer surface; and,

a vertical axis;

fluidly connected to a dipleg, said dipleg comprising:

an upper part; and,

a lower part comprising a lower end comprising a flapper valve;

wherein the lower part of the dipleg has a diameter which increases along the lower part to the lower end of the dipleg

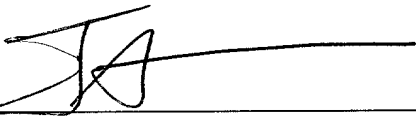
wherein a pressure difference exists between the cyclone housing and just beneath the lower end of the dipleg of between about 1000 Pa and about 40000 Pa;
the solids have a diameter ranging between about $1 \cdot 10^{-6}$ m and about $200 \cdot 10^{-6}$ m; and,
the solids comprise fluid catalytic catalysts.

Please add new claims 8 and 9:

8. The apparatus of claim 2, in which the lower end of the dipleg is located within a vessel in which the solids are disposed.
9. The process of claim 5, further comprising fluid catalytic cracking.

Respectfully submitted,

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